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# United States Patent [19]

Grimm et al.

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[54] PORTABLE COMPUTER STORED  
REMOVABLE MOBILE TELEPHONE[75] Inventors: Thomas R. Grimm; Ronald L. Smith;  
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144

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## [57] ABSTRACT

The present invention provides a solution to the dual problems of mobility and portability associated with using a portable telephone in combination with a portable computer. A portable telephone (166) is constructed to fit within a cavity (210) in a portable computer (164). When fully inserted into the computer (166), the portable telephone (166) is physically connected to the portable computer (164) by a latching mechanism and communicates with the portable computer by means of a computer/portable telephone interface (172, 192, 204 that electrically connects the portable telephone to the portable computer. Physically and electrically connecting the portable telephone to the portable computer eliminates the need for a cable or tethered connection between a portable computer and a portable telephone. In one embodiment of the invention, the portable telephone serves as the portable computer's modem and function while installed in the computer. Thus, the portable phone facilitates the transmission and reception of data between the portable computer and another computer connected to the telephone system. In another embodiment of the invention, the portable computer (and not the portable telephone), contains the modem that is utilized for telephonic data communications. In yet another embodiment of the invention, a modem is omitted altogether for digital data communications. An operator of the portable computer/portable telephone also has the option of using the portable telephone for voice transmission independently of the computer, or may enjoy hands free voice operation by using the portable computer's internal speaker and microphone. The portable telephone operates on the computers internal battery/power system while installed in the portable computer and on it's own battery (charged while in the portable computer) when used independently of the portable computer.

29 Claims, 79 Drawing Sheets

